

LISTING OF CLAIMS:

Please amend the claims as follows:

1. – 5. (Cancelled)

6. (Original) A method of altering an optical waveguide to achieve a desired optical signal response from said waveguide, the method comprising:

- a) inducing an increase in refractive index in a portion of said waveguide;
- b) measuring an optical signal response from said waveguide;
- c) heating a localized section of said portion to reduce said increase in said section if said optical signal response is not the desired optical signal response; and
- d) repeating steps b) and c) until the desired optical signal response is achieved.

7. (Currently Amended) The [[A]] method as in claim 6, wherein said heating is accomplished by using light which is absorbed at a surface of said waveguide to produce localized heat.

8. (Currently Amended) The [[A]] method as in claim 6, further including the step of heating at least said portion to stabilize said change prior to step b).

9. – 13. (Cancelled)

Please add the following new claims:

14. (New) The method as in claim 6, wherein said heating is accomplished by using a laser.

15. (New) The method as in claim 6, wherein said heating is accomplished by using a CO₂ laser.

16. (New) The method as in claim 6, wherein said inducing is accomplished by using a UV light source.

17. (New) The method as in claim 16, further including placing a phase mask between said UV light source and said waveguide to produce a grating in said portion of said waveguide.

18. (New) A system for altering an optical waveguide to achieve a desired optical signal response from said waveguide, the system comprising:

a member configured to induce an increase in refractive index in a portion of said waveguide;

a measurement member configured to measure an optical signal response from said waveguide; and

a heat member configured to heat a localized section of said portion to reduce said increase in said section if said optical signal response is not the desired optical signal response.

19. (New) The system as in claim 18, wherein said heat member comprises a light which is absorbed at a surface of said waveguide to produce localized heat.

20. (New) The system as in claim 18, further including a heating system configured to stabilize said increase in the refractive index.

21. (New) The system as in claim 18, wherein said heat member is a laser.

22. (New) The system as in claim 18, wherein said heat member is a CO₂ laser.

23. (New) The system as in claim 18, wherein said member configured to induce an increase in refractive index in a portion of said waveguide is a UV light source.

24. (New) The system as in claim 23, wherein a phase mask is positioned between said UV light source and said waveguide to produce a grating in said portion of said waveguide.